

# Human-Computer Interaction in Online Communities

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*One major impact of the Internet (net) has been its support for computer-mediated online communities. Communication through email and list servers and shared information archives through web browsers and servers support the discourse and knowledge processes of on-line communities in such a novel and effective way as to be revolutionary. Human-computer interaction (HCI) issues arise in the support of individual users of the Internet because the rapid growth of the technology has been achieved by repurposing existing tools without necessarily taking into account novel requirements. There are also new HCI issues emerging at the community level, and tools are being built that add to the effectiveness of such communities by organizing their knowledge products, supporting awareness of new material, attracting relevant members, and so on. This article addresses issues of HCI in online communities, the underlying cognitive, cultural, social and media theories, empirical modeling of community processes, and the use of the results to improve the supporting technology.*

*Keywords: human-computer interaction, online communities, utility, usability, likeability.*

## 1. INTRODUCTION

Our research focus has long been the study and support of human-computer interaction, but it has gradually shifted from a focus on individuals and their cognitive processes to groups and their cognitive processes. Some groups that we have been supporting and studying have been professional communities defined only by their common interests for whom we, or others, provide services. Other have been major international projects with better defined membership related to an agenda of specific tasks. What we have come to realize is that the effective support of such communities depends on modeling not only the cognitive processes of individuals, but also those of the community as a whole. Many of the tools we have developed support community processes, and the most significant and challenging of these are those that model these processes dynamically so that the community can reflect upon its own operations.

One may see some of the issues by contrasting two recent books: Nielsen's (2000) *Designing Web Usability* is a valuable application of classical HCI principles to the design of web sites; Kim's (2000) *Community Building on the Web* is also valuable in proposing well-grounded good practice for managing the human side of a web community. What is needed now is a wider concept of HCI

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